LEVERAGE AND FIRM'S VALUE:
AN EMPIRICAL REVIEW OF CONCEPT WITH REFERENCE TO HIGH LEVERAGED INDIAN COMPANIES

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ABSTRACT:
The present study attempts to investigate whether high financial leverage has significant and positive impact on firm's value. For this purpose, after multi stage filtration process, we selected eleven companies, listed on Indian stock exchanges, having more than fifty percent of debt ratio in their capital structure. The time frame for data analysis was from year 2001-2015. The data set was analysed using descriptive analysis (calculating financial ratios viz Return on Equity (ROE), Debt Ratio (DR) and Debt-Equity-Ratio (DER)); descriptive statistics; correlation test and multiple regression analysis. Out of above variables explained in model, ROE was dependent variable representing the firms value and DR and DER were independent variables representing financial leverage. We observed that (DR) has a low degree of positive correlation with (ROE) whereas (DER) has a negative relationship with (ROE). The R Square statistics indicates that most of independent variable (83.6%) are other than independent variables under study (DR and DER) affecting (ROE) and confirms that (DR and DER) are not major factors determining (ROE) of the companies under study for selected period.
Key Words: Leverage, Firm's Value, Return on Equity, Debt Ratio, Debt Equity Ratio

INTRODUCTION:
It has always been debatable whether high debt proportion in capital structure of a firm has significant role in boosting shareholders value. As argued in MM theory that capital structure composition has no role to play in boosting value of a firm; even though many companies have a high debt equity ratio in their capital structure. Hence it becomes inevitable to examine the role of leverage on boosting firm's value in current scenario when many companies have shown their inability to repay debts and bank's NPAs are mounting high year after year. Banks have been allowed to restructure their loan by converting them in to equity under SDR scheme, permitted by RBI. The present study therefore attempts to investigate the performance of high debt laden companies and try to find out whether high debt ratio has been significant and positive in scaling up shareholders' value.

Traditionally firms keep an optimal mix of debt and equity capital not only to get the advantage of tax on interest, eventually to magnify the shareholders' return under favourable economic condition. The another motive behind increasing debt portion or financial leverage to not to dilute the equity ownership on permanent basis. And hence debt financing provides them an option to arrange funds till it is required and can be paid off when requirement is over without diluting equity ownership and increasing shareholders' value. Companies do keep leverage high to minimize the WAAC which

eventually used to calculate the present value of anticipated future cash flows. A low WACC increases the present value of future cash flows which is projected to increase share price.

LITERATURE REVIEW:

Hiran Sanjay (2016) in his study, "Financial Performance Analysis of Indian Companies Belongs to Automobile Industry with Special Reference to Liquidity & Leverage", analysed data of 25 Indian automobile companies for the period of five years from 2011 to 2015, and found that both operating and financial leverage has significant and negative relation with profitability in case of Indian automobile companies under study. Evgeny Ilyukhin (2015) in his study, "The impact of financial leverage on firm performance: evidence from Russia", conducted on a large sample of Russian joint-stock companies for the period from 2004–2013, observed that the impact of financial leverage on Russian firms' performance has been negative. Khedkar EB (2015) in his study, "Leverage: Analysis and Profitability for Dr. Reddy's Laboratories", observed that degree of operating leverage is significant & negatively correlated with return on investments. However, the degree of financial leverage and combined leverage is positive but not significant with return on investments. Ahmad Nawaz, et al. (2015) in their study, "Impact of Financial Leverage on Firms' Profitability: An Investigation from Cement Sector of Pakistan", establish a stochastic relationship between financial leverage and profitability of 18 cement companies operating in Pakistan and found that financial leverage has a statistically significant inverse impact on profitability at 99% confidence interval. Perinpanathan Rajkumer (2014) in his study, "Impact of Financial Leverage on Financial Performance: Special Reference to John Keells Holdings plc in Sri Lanka", found a negative relationship between the financial leverage and the financial performance of the John Keells Holdings plc. But found financial leverage having a significant impact on the financial performance. Kumar M Ramana (2014) in his study, "An Empirical Study on Relationship between Leverage and Profitability in Bata India Limited", observed that degree of financial leverage is positively correlated with the ROI. Rehman (2013) in his study, "Relationship between financial leverage and financial performance in listed sugar companies of Pakistan", examines the positive relationship of debt equity ratio with return on asset and sales growth, and negative relationship of debt equity ratio with earning per share, net profit margin and return on equity. Akhtar Shehla, et al. (2012) in their study, "Relationship between Financial Leverage and Financial Performance: Evidence from Fuel & Energy Sector of Pakistan", found a positive relationship between the financial leverage and the financial performance of the companies. Kebewar Mazen (2007) in his study, "The Effect of Debt on Corporate Profitability Evidence from French Service Sector", using panel data sample of 2240 French non listed companies of service sector during 1999-2006, found that debt ratio has no effect on corporate profitability, regardless of the size of company. Enuju and Soocheong (2005) in their study, "The effect of financial leverage on profitability and risk of Restaurant firms", analysed financial statements and stock prices of sixty-two restaurant firms in the United States for the years 1998 through 2003 and observed that financial leverage does not influence the restaurant firms' profitability.

OBJECTIVES AND RATIONAL FOR STUDY:

There exists a general perception that there is a relationship between the financial leverage and the performance of the firms. Traditionally there has been two schools; one which believes in positive relationship (Net Income Approach) and other which repudiates for any relationship (MM Approach). Many recent studies conducted across the globe seems supporting MM approach as they observed either a very low positive relationship or a negative relationship among the explained variables. The quoted studies were conducted either for short period or for a specific industry or sector. Keeping such limitations in mind the researchers were motivated to conduct the study for a longer period and across industries to investigate the relationship between financial leverage and firm's value. Hence the main objective of this study is to analyse the impact of high financial leverage on firm's value.

METHODOLOGY AND MODEL EXPLAINED:

In present study we collected financial performance data (Balance Sheet and Profit & Loss account) of top hundred debt laden Indian companies, across sectors on the basis of their debt ratio. In second stage

we eliminated Banks and Non-Bank Finance Companies (NBFCs) and hence left with forty-four companies. In third stage we left companies whose financial data was not available for selected period for study which was from year 2001 to 2015. In fourth stage we further filtered our sample companies on the basis of high debt ratio. We selected only those companies having debt ratio more than fifty percent. Finally, we were left with eleven companies having debt ratio more than fifty percent. The required data for analysis was collected from sample company's annual report for fifteen years ranging from year 2001-2015, since ex-post factor research design was used. Some of data were also collected from website such as moneycontrol.com and moneybhai.com. The variables that were tested in this study were Return on Equity (ROE), Debt Ratio (DR), and Debt-Equity-Ratio (DER).

In order to analyse the impact of financial leverage on firms' value, we analyse data in two sets. In first set descriptive analysis was done calculating various financial ratios, used further as dependent and independent variables. These ratios were Return on Equity (ROE), Debt Ratio (DR) and Debt-Equity-Ratio (DER). Out of above variables explained in model, ROE was dependent variable representing the firms' value and DR and DER were independent variables representing financial leverage.

In the second set we analyse correlation to measure the degree of association between the variables under examination. Also used multiple regression analysis (for more than one independent variable) to examine the relationship of dependent variables (ROE) with independent variables (DR and DER) to know the effect of selected independent variables on firms' value (ROE).

The tools to analyse the data set were SPSS and MS Excel.

The Model under study used was; $\quad Y = b_0 + b_1 x_1 + b_2 x_2 + \ldots\ldots + \varepsilon_i$

Where: Y = Dependent variable (ROE)
$\quad$ X = Independent variables; x_1 (DR), x_2 (DER)
$\quad$ b_0 = Intercept for X variable; $b_1 - b_2$ (coefficient for the independent variables X)
$\quad$ ε_i = The error term
$\quad$ Hence the model comes out as;
$\quad$ $(ROE)_{yt} = b_0 + b_1(DR)_{yt} + b_2(DER)_{yt} + \varepsilon_i$
$\quad$ Where: ROE = Return on Equity, DR = Debt Ratio, DER = Debt-Equity-Ratio and εi = Error term

DATA ANALYSIS, RESULTS AND DISCUSSION:

Table-1: Descriptive Statistics

Descriptive Statistics

Variables	Mean	Std. Deviation	N
ROE	.1628	1.24974	165
DR	.6987	.27288	165
DER	2.9928	12.07907	165

Descriptive statistics table above express that the firm's value as represented by Return on Equity (ROE) and financial leverage represented by Debt Ratio (DR) and Debt-Equity Ratio (DER), under the study, have positive mean values. For Return on Equity (ROE) mean value is 0.1628; for Debt Ratio (DR) mean value is 0.6987 and for Debt Equity Ratio (DER) the mean value is 2.9938. However, the Standard Deviations for the observations are spread. For ROE, standard deviation is 1.249 which indicates that data is moderately dispersed from its mean value. For DR, standard deviation is very low 0.2728 which signposts that data set is closely following its mean value. However, standard deviation in case of DER is widely dispersed from its mean value which is 12.0790.

Table-2: Correlation Matrix

The Relationships among the variables under study are analysed using Karl Pearson Correlation test. The correlation matrix is presented in table below;

Correlations

		ROE	DR	DER
ROE	Pearson Correlation	1	.104	-.263**
	Sig. (1-tailed)		.091	.000
	N	165	165	165
DR	Pearson Correlation	.104	1	.071
	Sig. (1-tailed)	.091		.183
	N	165	165	165
DER	Pearson Correlation	-.263**	.071	1
	Sig. (1-tailed)	.000	.183	
	N	165	165	165

**Correlation is significant at the 0.01 level (1-tailed).

The correlation table above indicates that Debt Ratio (DR) has a very low degree of positively correlation (0.104) with Return on Equity (ROE), with significance level of (0.091) at 1 percent level, which signals that high (DR) has not worked for companies, under study, to magnify desired firm value (ROE). Whereas Debt Equity Ratio (DER) is negatively correlated (-0.263) with (ROE) with a significance level (000) at 1 percent level, which signals that increase in DER has led companies, under study, to decreased firm value (ROE). It has also been observed that (DR) has a low level of positive correlation (0.071) with (DER) with a statistical significance of (0.183) which is insignificant at 1 percent level.

Table-3: Regression Analysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	F	df	Sig.
1	.291[a]	.164	.093	.80317	2.155	7.471	2	.001

a. Predictors: (Constant), DER, DR
b. Dependent Variable: ROE

The R value in above table is 0.291 which again confirms the low level correlation among the variables. The value of R Square in above table also shows a low strength of relationship, as only 16.4 percent of dependent variable (ROE) were explained by the independent variables (DR) and (DER). Which means 83.6 percent of dependent variables are affected by independent variables other than (DR and DER), confirming the correlation outcomes that (DR) and (DER) are not major determining factors for (ROE). The Durbin-Watson score in above table (2.155) is within the prescribed limits and indicates that the data set are random and not auto-correlated. The F statistics confirms the model fit and observed relationship statistically significant with F value (7.471) at 1 percent significance level.

CONCLUSION:

The results of present study support the finding of previous study by Evgeny Ilyukhin (2015), Ahmad Nawaz et al (2015) and others, that financial leverage has either very low degree of positive correlation or negative correlation. The results of present study show that debt ratio (DR) has a low degree of positive correlation (0.104) with return on equity (ROE) which is almost insignificant whereas debt equity ratio (DER) has a negative relationship (-0.263) with (ROE). The R Square statistics also indicates that most of independent variable (83.6%) are other than independent variables under study (DR and DER) affecting (ROE) and confirms that (DR and DER) are not major factors determining (ROE) or firms' value of the companies under study for selected period.

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